

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A ceramic material comprising:

a solid solution comprising:

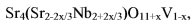
a first ceramic material having a perovskite structure and defining a host lattice,  
the first ceramic material comprising lead, zirconium and titanium; and

a second ceramic material having a cryolite structure and comprising  $A_4(B_{2-2x/3}Nb_{2+2x/3})O_{11+x}V_{1-x}$ , where A comprises barium or strontium, where B comprises strontium, magnesium, or calcium, where V comprises an oxygen vacancy, and where  $0 \leq x \leq 1$ .

2. (Previously Presented) The ceramic material of claim 1, wherein the first ceramic material and the second ceramic material comprise a mixed crystal phase.

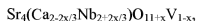
3. (Canceled)

4. (Currently Amended) The ceramic material of claim 1, wherein the second ceramic material comprises



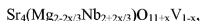
where V comprises an oxygen vacancy, and where  $0 \leq x \leq 1$ .

5. (Currently Amended) The ceramic material of claim 1, wherein the second ceramic material comprises



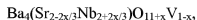
where V comprises an oxygen vacancy, and where:  $0 \leq x \leq 1$ .

6. (Currently Amended) The ceramic material of claim 1, wherein the second ceramic material comprises



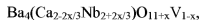
where V comprises an oxygen vacancy, and where  $0 \leq x \leq 1$ .

7. (Currently Amended) The ceramic material of claim 1, wherein the second ceramic material comprises



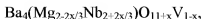
where V comprises an oxygen vacancy, and where  $0 \leq x \leq 1$ .

8. (Currently Amended) The ceramic material of claim 1, wherein the second ceramic material comprises



where V comprises an oxygen vacancy, and where  $0 \leq x \leq 1$ .

9. (Currently Amended) The ceramic material of claim 1, wherein the second ceramic material comprises



where V comprises an oxygen vacancy, and where  $0 \leq x \leq 1$ .

10. (Previously Presented) The ceramic material of claim 1, wherein the first ceramic material comprises  $\text{Pb}(\text{Zr}_a\text{Ti}_{1-a})\text{O}_3$ , where  $0.5 \leq a \leq 0.6$ .

11. (Previously Presented) The ceramic material of claim 1, wherein the first ceramic material comprises a mixed crystal phase, the first ceramic material comprising a PZT ceramic and an additional component having a perovskite lattice-type structure.

12. (Previously Presented) The ceramic material of claim 11, wherein the additional component comprises  $\text{KNbO}_3$ .

13. (Previously Presented) The ceramic material of claim 11, wherein the additional component comprises  $\text{Pb}(\text{M}^{\text{II}}_{1/3}\text{M}^{\text{V}}_{2/3})\text{O}_3$ , where  $\text{M}^{\text{II}}$  comprises Mg, Zn, Co, Ni, Mn, or Cu, and where  $\text{M}^{\text{V}}$  comprises Nb, Ta, or Sb.

14. (Previously Presented) The ceramic material of claim 11, wherein the additional component comprises  $\text{Pb}(\text{M}^{\text{II}}_{1/2}\text{M}^{\text{VI}}_{1/2})\text{O}_3$ , where  $\text{M}^{\text{II}}$  comprises Mg, Zn, Co, Ni, Mn, or Cu, and where  $\text{M}^{\text{VI}}$  comprises W.

15. (Previously Presented) The ceramic material of claim 11, wherein the additional component comprises  $\text{Pb}(\text{M}^{\text{III}}_{1/2} \text{M}^{\text{V}}_{1/2})\text{O}_3$ , where  $\text{M}^{\text{III}}$  comprises Fe, Mn, Cr, or Ga, and where  $\text{M}^{\text{V}}$  comprises Nb, Ta, or Sb.

16. (Previously Presented) The ceramic material of claim 11, wherein the additional component comprises  $\text{Pb}(\text{M}^{\text{III}}_{2/3} \text{M}^{\text{VI}}_{1/3})\text{O}_3$ , where  $\text{M}^{\text{III}}$  comprises Fe, Mn, Cr, or Ga, and where  $\text{M}^{\text{VI}}$  comprises W.

17. (Previously Presented) The ceramic material of claim 11, wherein the additional component comprises  $\text{Pb}(\text{Li}^{1}_{1/4} \text{M}^{\text{V}}_{3/4})\text{O}_3$ , where  $\text{M}^{\text{V}}$  comprises Nb, Ta, or Sb.

18. (Currently Amended) A ceramic comprising the ceramic material of claim 1, the ceramic comprising:

~~a material~~ having a formula  $\text{A}_{1-b-c}\text{B}_b\text{C}_c$ , where  $0 \leq b \leq 0.5$  and  $0 < c \leq 0.01$ ;

wherein:

A comprises  $\text{Pb}(\text{Zr}_a\text{Ti}_{1-a})\text{O}_3$ , where  $0.5 \leq a \leq 0.6$ ;

B comprises an additional component having a perovskite lattice-type structure;

and

C comprises a ceramic material having a cryolite lattice-type structure.

19. (Previously Presented) The ceramic of claim 18, further comprising up to 3 mol.% of PbO.

20. (Previously Presented) The ceramic of claim 18 which is substantially free of  $\text{KNbO}_3$ .

21. (Withdrawn) A piezo-actuator comprising:  
a stack comprised of piezoelectric ceramic layers and electrode layers interspersed among the piezoelectric ceramic layers;  
wherein at least one of the piezoelectric ceramic layers comprises a ceramic material according to claim 1.

22. (Withdrawn) A method of producing a ceramic material, the ceramic material comprising (i) a first ceramic material having a perovskite structure and comprising a host lattice, the first ceramic material comprising lead, zirconium and titanium, and (ii) a second ceramic material having a cryolite structure, wherein the method comprises:  
mixing a precursor material of the second ceramic material with a precursor material of the first ceramic material.

23. (Withdrawn) The method of claim 22, wherein the precursor material of the second ceramic material comprises a previously-prepared cryolite phase.

24. (Previously Presented) The ceramic material of claim 1 which is substantially free of  $\text{KNbO}_3$ .

25. (Withdrawn) A piezo-actuator comprising:  
a stack comprised of piezoelectric ceramic layers and electrode layers interspersed among the piezoelectric ceramic layers;  
wherein at least one of the piezoelectric ceramic layers comprises a ceramic according to claim 18.